

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (Currently Amended) An airport lighting aid simulation generator, comprising:
 - a means for receiving position and altitude signals;
 - a means for determining position and altitude information from the position and altitude signals;
 - a means for retrieving runway position and direction information from a database of airport information as a function of the position and altitude signals;
 - a means for determining a glide path as a function of the runway position and direction information retrieved from the database;
 - a means for determining deviation from the glide path as a function of comparing the position and altitude information with the glide path; and
 - a means for outputting a signal representative of the deviation from the glide path; and
a means for interpreting the signal output by the means for outputting as a pattern of illuminated indicators on a cockpit display, wherein the pattern of illuminated indicators simulates a known airport lighting aid.
2. (Original) The generator of claim 1, further comprising a means for visually displaying the deviation from the glide path as a function of the deviation signal.
3. (Original) The generator of claim 2 wherein the displaying means further comprises means for displaying the deviation as a pattern of color coded indicators.

4. (Previously Presented) The generator of claim 2 wherein the displaying means further comprises means for displaying information as to a degree of deviation from the glide path as a visual image relative to the pattern of color coded indicators.
5. (Previously Presented) The generator of claim 1 wherein the means for determining a glide path further comprises means for generating the glide path as a combination of the runway position and direction with the position and altitude information.
6. (Previously Presented) The generator of claim 1 wherein the means for determining a glide path further comprises means for retrieving the glide path from the database.
7. Cancelled
8. (Currently Amended) A simulated airport lighting aid generator, comprising:
an on-board processor structured to receive a plurality of navigation signals representative of a position and an altitude of a host aircraft;
an on-board signal generator operated by the processor, the generator being structured to retrieve airport glide path information from a database of stored airport glide path information as a function of the position signal, and output signal representative of a degree of coincidence with the glide path as a function of comparing the position and altitude signals with the glide path information; and
an on-board display structured to receive the signal output by the signal generator and responsively output a visual indication of the degree of coincidence with the glide path, wherein a pattern of illuminated indicators are positioned simulating a known airport lighting aid.
9. Cancelled
10. Cancelled
11. Cancelled

12. (Currently Amended) The generator of claim 8 wherein the pattern of illuminated indicators are positioned on the display to appear in positions consistent with ground-based airport lighting aids as seen on approach.

13. Cancelled

14. (Currently Amended) A glide path deviation generator, comprising:

a memory having a stored database of airport information accessible as a function of position, the airport information including runway location, elevation and direction information;

a processor coupled to receive position and elevation data and coupled to the memory for retrieving the airport information as a function of the position, the processor being structured to operate a computer program for generating a glide path, comparing the position and elevation data to the glide path, and generating a signal representative of deviation of the position and elevation data from the glide path; and

a cockpit display being coupled to receive the deviation signal and being structured to display a pattern of color coded indicators as a function of the deviation signal, wherein the pattern of indicators further comprises a pattern of indicators that substantially simulates an airport lighting aid.

15. (Original) The generator of claim 14 wherein operating a computer program for generating a glide path further comprises operating the computer program as a function of the airport information to compute a glide path.

16. (Original) The generator of claim 14 wherein operating a computer program further comprises operating the computer program repeatedly for comparing updated position and elevation data to the glide path, and generating a signal representative of deviation of the updated position and elevation data from the glide path.

17. Cancelled

18. Cancelled

19. (Currently Amended) The generator of claim 147 wherein the airport lighting aid substantially simulated by the pattern of indicators further comprises a simulated Visual Approach Slope Indicator having a pointer portion that is programmed to simulate a vertical deviation scale.

20. (Currently Amended) A computer program product for indicating deviation from a glide path, wherein the computer program product comprises:

a computer-readable storage medium; and

computer-readable program code means embodied in the medium, the computer-readable program code means comprising:

first computer-readable program code means for determining a global position from a received plurality of navigation data;

second computer-readable program code means for determining an altitude above ground level from one or more received navigation datum;

third computer-readable program code means for retrieving a plurality of airport information from a database of airport information as a function of the position determined from the first computer-readable program code means;

fourth computer-readable program code means for determining correspondence between the position determined from the first computer-readable program code means combined with the altitude determined from the second computer-readable program code means and a glide path determined as a function of the airport information determined from the first computer-readable program code means; and

fifth computer-readable program code means for outputting a signal as a function of the correspondence determined from the fourth computer-readable program code means; and

sixth computer-readable program code means for interpreting the signal output by the fifth computer-readable program code means as a pattern of color coded indicators on a cockpit display, wherein the pattern of display indicators simulates a known airport lighting aid.

21. (Original) The computer program product of claim 20 wherein the fourth

computer-readable program code means for determining correspondence between the position combined with the altitude and the glide path further comprises means for computing the glide path as a function of the airport information.

22. (Original) The computer program product of claim 20 wherein the fourth computer-readable program code means for determining correspondence of the position and altitude with the glide path further comprises computer-readable program code means for retrieving the glide path as one of the plurality of airport information retrieved from the database of airport information.

23. Cancelled.

24. Cancelled.

25. (Currently Amended) The computer program product of claim 2420, wherein the simulated airport lighting aid further comprises a substantially conformal presentation.

26. Cancelled

27. (Currently Amended) The computer program product of claim 2420, further comprising a seventh computer-readable program code means for interpreting the signal output by the fifth computer-readable program code means as a pointer indicator for simulating a vertical deviation scale on the cockpit display.

28. (Currently Amended) A method for using an electronic circuit to compare a signal conveying navigation data with a predetermined glide path, the method comprising:
receiving a plurality of navigation signals;

retrieving airport information from a database as a function of one or more of the navigation signals;

determining deviation from a glide path as a function of one or more of comparing the navigation signals and one or more of the airport information; and

outputting a signal representative of the deviation from the glide path; and

visually displaying the deviation from the glide path as a function of the deviation signal, wherein visually displaying the deviation includes displaying an illuminated indicator indicating the degree of deviation from the glide path positioned relative to a pattern of illuminated indicators simulating a known airport lighting aid.

29. Canceled

30. (Currently Amended) The method of claim ~~29~~²⁸ wherein displaying the deviation further comprises displaying an airport image as a function of the airport information retrieved from the database; and displaying the deviation as a substantially conformal presentation relative to the airport image.

31. (Currently Amended) The method of claim ~~29~~²⁸ wherein displaying the deviation further comprises displaying color coded information as to a degree of deviation.

32. (Original) The method of claim 28 wherein determining the deviation from a glide path further comprises computing the glide path as a function of one or more of the airport information.

33. (Original) The method of claim 28 wherein determining the deviation from a glide path further comprises retrieving the glide path from the database.

34. (Original) The method of claim 28, further comprising updating the deviation over time.

35. (Original) The method of claim 34 wherein updating the deviation over time further comprises repeating the determining of the deviation from the glide path at predetermined intervals.

36. (Canceled).

37. (Currently Amended) The generator of claim 8 wherein the display further comprises:
~~a pattern of illuminated indicators simulating a known airport lighting aid, and~~
an illuminated degree of deviation indicator indicating a degree of deviation from coincidence with the glide path, the illuminated degree of deviation indicator being positioned relative to the pattern of illuminated indicators simulating a known airport lighting aid.

38. Cancelled

39. (Previously Presented) The generator of claim 8 wherein the signal generator is further structured to output signals representative of a lateral deviation scale relative to the runway; and
the display is further structured to responsively output a visual indication of the lateral deviation scale.

40. (Previously Presented) The generator of claim 8 wherein the signal generator is further structured to output signals representative of horizontal and longitudinal perspective line segments in positions relative to ground as a function of the airport information and the position and altitude of the host aircraft; and
the display is further structured to responsively output a visual indication of the horizontal and longitudinal perspective line segments in positions constructed to appear conformal to a flat surface on the ground.

41. (Previously Presented) The generator of claim 8 wherein the signal generator is further structured to output signals representative of a path to a current waypoint and a next waypoint; and

the display is further structured to responsively output a visual indication of the path to the current and next waypoints.

42. (Previously Presented) The generator of claim 1 wherein the means for determining deviation from the glide path further comprises a means for determining deviation from the glide path as a function of comparing the position and altitude information with the glide path exclusive of an Instrument Landing System (ILS) signal.

43. (Previously Presented) The generator of claim 8 wherein the navigation signals are further exclusive of an Instrument Landing System (ILS) signal.